

ND-2019-1-G
284073**Duke, Daphne**

From: Boyd, Jocelyn
Sent: Wednesday, April 10, 2019 7:46 AM
To: Easterling, Deborah; Duke, Daphne
Subject: FW: [External] Incident Report - Spartanburg
Attachments: SC_OR_2019-03-21_Spartanburg.pdf

From: Berry, Farris L <Farris.Berry@duke-energy.com>
Sent: Wednesday, April 10, 2019 7:45 AM
To: Eustace, Johnny <jeustace@ors.sc.gov>; Boyd, Jocelyn <Jocelyn.Boyd@psc.sc.gov>
Cc: Gaglio, Victor M <Victor.Gaglio@duke-energy.com>; Woody, Brian C <Brian.Woody@duke-energy.com>; Petchul, Martin P <Martin.Petchul@duke-energy.com>; Henderson, Milton J <Milton.Henderson@duke-energy.com>
Subject: [External] Incident Report - Spartanburg

Mr. Eustace and Ms. Boyd,


Please find attached a copy of the incident report for an event that occurred in Spartanburg, SC on March 21, 2019.

Thank you.

Farris Berry | Manager – Pipeline Safety | Piedmont Natural Gas
4720 Piedmont Row Drive | Charlotte, NC 28210 | 📞 Office: 704.731.4618 | ✉ Farris.Berry@Duke-Energy.com

RECEIVED
APR 10 2019
PSC SC
MAIL / DMS

ND-2019-1-G

NOTICE: This report is required by 49 CFR Part 191. Failure to report can result in a civil penalty not to exceed \$100,000 for each violation for each day that such violation persists except that the maximum civil penalty shall not exceed \$1,000,000 as provided in 49 USC 60122.		OMB NO: 2137-0522 EXPIRATION DATE: 08/31/2020
 U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration	INCIDENT REPORT – GAS DISTRIBUTION SYSTEM	Report Date <u>4/10/2019</u> No. _____ (DOT Use Only)
A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2137-0522. Public reporting for this collection of information is estimated to be approximately 10 hours per response, including the time for reviewing instructions, gathering the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, PHMSA, Office of Pipeline Safety (PHP-30) 1200 New Jersey Avenue, SE, Washington, D.C. 20590.		
INSTRUCTIONS <i>Important: Please read the separate instructions for completing this form before you begin. They clarify the information requested and provide specific examples. If you do not have a copy of the instructions, you can obtain one from the PHMSA Pipeline Safety Community Web Page at https://www.phmsa.dot.gov/forms/pipeline-forms.</i>		
PART A – KEY REPORT INFORMATION		Report Type: (select all that apply) <input type="checkbox"/> Original <input type="checkbox"/> Supplemental <input checked="" type="checkbox"/> Final
Last Revision Date _____		
1. Operator's OPS-issued Operator Identification Number (OPID): <u>15518</u> 2. Name of Operator: <u>Piedmont Natural Gas</u> 3. Address of Operator: 3.a <u>4720 Piedmont Row Drive</u> (Street Address) 3.b <u>Charlotte</u> (City) 3.c State: <u>NC</u> 3.d Zip Code: <u>28210</u>		
4. Local time (24-hr clock) and date of the Incident: <u>09:10</u> / <u>3</u> / <u>21</u> / <u>2019</u> Hour Month Day Year 5. Location of Incident: 5.a <u>504 Overland Drive</u> (Street Address or location description) 5.b <u>Spartanburg</u> (City) 5.c <u>Spartanburg</u> (County or Parish) 5.d State: <u>SC</u> 5.e Zip Code: <u>29307</u> 5.f Latitude: <u>34.955396</u> Longitude: - <u>-81.892238</u>		6. National Response Center Report Number : _____ 7. Local time (24-hr clock) and date of initial telephonic report to the National Response Center: _____ / _____ / _____ Hour Month Day Year

<p>8. Incident resulted from:</p> <p><input checked="" type="checkbox"/> Unintentional release of gas</p> <p><input type="checkbox"/> Intentional release of gas</p> <p><input type="checkbox"/> Reasons other than release of gas</p>			
<p>9. Gas released : (select only one, based on predominant volume released)</p> <p><input checked="" type="checkbox"/> Natural Gas</p> <p><input type="checkbox"/> Propane Gas</p> <p><input type="checkbox"/> Synthetic Gas</p> <p><input type="checkbox"/> Hydrogen Gas</p> <p><input type="checkbox"/> Landfill Gas</p> <p><input type="checkbox"/> Other Gas ➡ *Name: _____</p>			
<p>10. Estimated volume of gas released: _____</p>		<p>Thousand Cubic Feet (MCF)</p>	
<p>11. Were there fatalities? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If Yes, specify the number in each category:</p> <p>11.a Operator employees _____</p> <p>11.b Contractor employees working for the Operator _____</p> <p>11.c Non-Operator emergency responders _____</p> <p>11.d Workers working on the right-of-way, but NOT associated with this Operator _____</p> <p>11.e General public _____</p> <p>11.f Total fatalities (sum of above) _____ 0</p>		<p>12. Were there injuries requiring inpatient hospitalization? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If Yes, specify the number in each category:</p> <p>12.a Operator employees _____</p> <p>12.b Contractor employees working for the Operator _____</p> <p>12.c Non-Operator emergency responders _____</p> <p>12.d Workers working on the right-of-way, but NOT associated with this Operator _____</p> <p>12.e General public _____</p> <p>12.f Total injuries (sum of above) _____ 0</p>	
<p>13. Was the pipeline/facility shut down due to the incident?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No ➡ Explain: _____</p> <p>If Yes, complete Questions 13.a and 13.b: (use local time, 24-hr clock)</p> <p>13.a Local time and date of shutdown _____ / _____ / _____</p> <p style="text-align: center;">Hour Month Day Year</p> <p>13.b Local time pipeline/facility restarted _____ / _____ / _____</p> <p style="text-align: center;">Hour Month Day Year</p> <p><input type="checkbox"/> Still shut down* (*Supplemental Report required)</p>			
<p>14. Did the gas ignite? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>			
<p>15. Did the gas explode? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>			
<p>16. Number of general public evacuated: _____</p>			
<p>17. Time sequence (use local time, 24-hour clock):</p> <p>17.a Local time operator identified failure _____ 09:24</p> <p style="text-align: center;">Hour 3 21 19</p> <p style="text-align: center;">Month Day Year</p> <p>17.b Local time operator resources arrived on site _____ 09:37</p> <p style="text-align: center;">Hour 3 21 19</p> <p style="text-align: center;">Month Day Year</p>			

PART B – ADDITIONAL LOCATION INFORMATION1. Was the Incident on Federal land? ☐ Yes ☒ No2. Location of Incident: *(select only one)*

- ☐ Operator-controlled property
- ☒ Public property
- ☐ Private property
- ☐ Utility Right-of-Way / Easement

3. Area of Incident: *(select only one)*

- ☒ Underground Specify: ☒ Under soil ☐ Under a building ☐ Under pavement
- ☐ Exposed due to excavation ☐ In underground enclosed space (e.g., vault)
- ☐ Other _____
- Depth-of-Cover (in): _____
- ☐ Aboveground Specify: ☐ Typical aboveground facility piping or appurtenance (e.g. valve or regulator station, outdoor meter set)
- ☐ Overhead crossing ☐ Inside a building
- ☐ In or spanning an open ditch ☐ In other enclosed space ☐ Other _____
- ☐ Transition Area Specify: ☐ Soil/air interface ☐ Wall sleeve ☐ Pipe support or other close contact area
- ☐ Other _____

4. Did Incident occur in a crossing? ☐ Yes ☒ No

If Yes, specify type below:

- ☐ Bridge crossing ⇒ Specify: ☐ Cased ☐ Uncased
- ☐ Railroad crossing ⇒ *(Select all that apply)* ☐ Cased ☐ Uncased ☐ Bored/drilled
- ☐ Road crossing ⇒ *(Select all that apply)* ☐ Cased ☐ Uncased ☐ Bored/drilled
- ☐ Water crossing ⇒ *(Select all that apply)* ☐ Cased ☐ Uncased ☐ Bored/drilled

Name of body of water (If commonly known): _____

Approx. water depth (ft): _____

PART C – ADDITIONAL FACILITY INFORMATION

1. Indicate the type of pipeline system:

- ☐ privately owned
☐ municipally owned
☒ investor owned
☐ cooperative
☐ Other ⇒ Specify: _____

2. Part of system involved in Incident: (select only one)

- ☒ Main ☐ Service ☐ Service Riser ☐ Outside Meter/Regulator set
☐ Inside Meter/Regulator set ☐ Farm Tap Meter/Regulator set
☐ District Regulator/Metering Station
☐ Other _____

2.a. Year "Part of system involved in Incident" was installed: _____ / or ☒ Unknown

3. When "Main" or "Service" is selected as the "Part of system involved in Incident" (from PART C, Question 2), provide the following:

*3.a Nominal diameter of pipe (in): 2.00

*3.b Pipe specification (e.g., API 5L, ASTM D2513): Unknown

3.c Pipe manufacturer: _____ or ☒ Unknown

3.d Year of manufacture: _____ or ☒ Unknown

4. Material involved in Incident:

- ☐ Steel ☐ Cast/Wrought Iron ☐ Ductile Iron ☐ Copper ☒ Plastic
☐ Reconditioned Cast Iron ☐ Unknown
☐ Other ⇒ Specify: _____

4.a. If Steel ⇒ Specify seam type: _____ or ☐ None or ☐ Unknown

4.b. If Steel ⇒ Specify wall thickness (inches): _____ / or ☐ Unknown

4.c. If Plastic ⇒ Specify type: ☐ Polyvinyl Chloride (PVC) ☒ Polyethylene (PE) ☐ Cross-linked Polyethylene (PEX)
☐ Polybutylene (PB) ☐ Polypropylene (PP) ☐ Acrylonitrile Butadiene Styrene (ABS)
☐ Polyamide (PA) ☐ Cellulose Acetate Butyrate (CAB)
☐ Other _____
☐ Unknown

4.d. If Plastic ⇒ Specify Standard Dimension Ratio (SDR): _____ or wall thickness: _____ or ☒ Unknown

4.e. If Polyethylene (PE) is selected as the type of plastic in PART C, Question 4.c ⇒
 Specify PE Pipe Material Designation Code (i.e., 2406, 3408, etc.) PE _____ or ☒ Unknown

5. Type of release involved: (select only one)

- ☐ Mechanical Puncture ⇒ Approx. size: _____ in. (axial) by _____ in. (circumferential)
☐ Leak ⇒ Select Type: ☐ Pinhole ☐ Crack ☐ Connection Failure ☐ Seal or Packing ☐ Other
☐ Rupture ⇒ Select Orientation: ☐ Circumferential ☐ Longitudinal ☐ Other _____
 Approx. size: _____ in. (widest opening) by _____ in. (length circumferentially or axially)
☒ Other ⇒ *Describe: Cut 2" Plastic Main

PART D – ADDITIONAL CONSEQUENCE INFORMATION	
1. Class Location of Incident: (select only one) <input type="checkbox"/> Class 1 Location <input type="checkbox"/> Class 2 Location <input type="checkbox"/> Class 3 Location <input type="checkbox"/> Class 4 Location	
2. Estimated Property Damage : <div style="margin-left: 20px;"> 2.a Estimated cost of public and non-Operator private property damage \$ _____ 2.b Estimated cost of Operator's property damage & repairs \$ <u>1,178</u> 2.c Estimated cost of Operator's emergency response \$ _____ 2.d Estimated other costs \$ _____ Describe: _____ 2.e Total estimated property damage (sum of above) \$ <u>1,178</u> <u>Cost of Gas Released</u> 2.f Estimated cost of gas released \$ <u>504</u> </div>	
3. Estimated number of customers out of service: <div style="margin-left: 20px;"> 3.a Commercial entities _____ 3.b Industrial entities _____ 3.c Residences <u>66</u> </div>	

PART E – ADDITIONAL OPERATING INFORMATION	
1. Estimated pressure at the point and time of the Incident (psig):	60
2. Normal operating pressure at the point and time of the Incident (psig):	60
3. Maximum Allowable Operating Pressure (MAOP) at the point and time of the Incident (psig):	
4. Describe the pressure on the system relating to the Incident: <i>(select only one)</i>	
<input checked="" type="checkbox"/> Pressure did not exceed MAOP <input type="checkbox"/> Pressure exceeded MAOP, but did not exceed 110% of MAOP <input type="checkbox"/> Pressure exceeded 110% of MAOP	
5. Was a Supervisory Control and Data Acquisition (SCADA)-based system in place on the pipeline or facility involved in the Incident?	
<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes ⇒	
5.a Was it operating at the time of the Incident?	<input type="checkbox"/> Yes <input type="checkbox"/> No
5.b Was it fully functional at the time of the Incident?	<input type="checkbox"/> Yes <input type="checkbox"/> No
5.c Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume or pack calculations) assist with the detection of the Incident?	<input type="checkbox"/> Yes <input type="checkbox"/> No
5.d Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the confirmation of the Incident?	<input type="checkbox"/> Yes <input type="checkbox"/> No
6. How was the Incident initially identified for the Operator? <i>(select only one)</i>	
<input type="checkbox"/> SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume or pack calculations) <input type="checkbox"/> Static Shut-in Test or Other Pressure or Leak Test <input type="checkbox"/> Controller <input type="checkbox"/> Air Patrol <input type="checkbox"/> Notification from Public <input checked="" type="checkbox"/> Notification from Third Party that caused the Incident	
<input type="checkbox"/> Local Operating Personnel, including contractors <input type="checkbox"/> Ground Patrol by Operator or its contractor <input type="checkbox"/> Notification from Emergency Responder <input type="checkbox"/> Other _____	
6.a If "Controller", "Local Operating Personnel, including contractors", "Air Patrol", or "Ground Patrol by Operator or its contractor" is selected in Question 6, specify the following: <i>(select only one)</i>	
<input type="checkbox"/> Operator employee <input type="checkbox"/> Contractor working for the Operator	
7. Was an investigation initiated into whether or not the controller(s) or control room issues were the cause of or a contributing factor to the Incident? <i>(select only one)</i>	
<input type="checkbox"/> Yes, but the investigation of the control room and/or controller actions has not yet been completed by the operator <i>(Supplemental Report required)</i> <input checked="" type="checkbox"/> No, the facility was not monitored by a controller(s) at the time of the Incident <input type="checkbox"/> No, the operator did not find that an investigation of the controller(s) actions or control room issues was necessary due to: <i>(provide an explanation for why the operator did not investigate)</i> <div style="border: 1px solid black; height: 30px; margin-top: 5px;"></div>	
<input type="checkbox"/> Yes, Specify investigation result(s): <i>(select all that apply)</i>	
<input type="checkbox"/> Investigation reviewed work schedule rotations, continuous hours of service (while working for the Operator) and other factors associated with fatigue <input type="checkbox"/> Investigation did NOT review work schedule rotations, continuous hours of service (while working for the Operator) and other factors associated with fatigue <i>(provide an explanation for why not)</i> <div style="border: 1px solid black; height: 30px; margin-top: 5px;"></div>	
<input type="checkbox"/> Investigation identified no control room issues <input type="checkbox"/> Investigation identified no controller issues <input type="checkbox"/> Investigation identified incorrect controller action or controller error <input type="checkbox"/> Investigation identified that fatigue may have affected the controller(s) involved or impacted the involved controller(s) response <input type="checkbox"/> Investigation identified incorrect procedures <input type="checkbox"/> Investigation identified incorrect control room equipment operation <input type="checkbox"/> Investigation identified maintenance activities that affected control room operations, procedures, and/or controller response <input type="checkbox"/> Investigation identified areas other than those above ⇒ Describe: _____ <div style="border: 1px solid black; height: 30px; margin-top: 5px;"></div>	

PART F – DRUG & ALCOHOL TESTING INFORMATION	
<p>1. As a result of this Incident, were any Operator employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug & Alcohol Testing regulations?</p> <p><input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/> Yes ⇒ 1.a Specify how many were tested: _____</p> <p>1.b Specify how many failed: _____</p>	
<p>2. As a result of this Incident, were any Operator contractor employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug & Alcohol Testing regulations?</p> <p><input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/> Yes ⇒ 2.a Specify how many were tested: _____</p> <p>2.b Specify how many failed: _____</p>	

PART G – APPARENT CAUSE

Select only one box from PART G in the shaded column on the left representing the APPARENT Cause of the Incident, and answer the questions on the right. Describe secondary, contributing, or root causes of the Incident in the narrative (PART H).

G1 – Corrosion Failure – *only one sub-cause can be picked from shaded left-hand column☐ **External Corrosion**

1. Results of visual examination:
☐ Localized Pitting ☐ General Corrosion
☐ Other _____
2. Type of corrosion: (select all that apply)
☐ Galvanic ☐ Atmospheric ☐ Stray Current ☐ Microbiological ☐ Selective Seam
☐ Other _____
3. The type(s) of corrosion selected in Question 2 is based on the following: (select all that apply)
☐ Field examination ☐ Determined by metallurgical analysis
☐ Other _____
4. Was the failed item buried under the ground?
☐ Yes ⇒ 4.a Was failed item considered to be under cathodic protection at the time of the incident?
 ☐ Yes ⇒ Year protection started: _____
 ☐ No
 4.b Was shielding, tenting, or disbonding of coating evident at the point of the incident?
 ☐ Yes ☐ No
 4.c Has one or more Cathodic Protection Survey been conducted at the point of the incident?
 ☐ Yes, CP Annual Survey ⇒ Most recent year conducted: _____
 ☐ Yes, Close Interval Survey ⇒ Most recent year conducted: _____
 ☐ Yes, Other CP Survey ⇒ Most recent year conducted: _____
 ☐ No
 ☐ No ⇒ 4.d Was the failed item externally coated or painted? ☐ Yes ☐ No
5. Was there observable damage to the coating or paint in the vicinity of the corrosion?
☐ Yes ☐ No
6. Pipeline coating type, if steel pipe is involved: (select only one)
☐ Fusion Bonded Epoxy ☐ Coal Tar ☐ Asphalt
☐ Polyolefin ☐ Extruded Polyethylene ☐ Field Applied Epoxy
☐ Cold Applied Tape ☐ Paint ☐ Composite ☐ None
☐ Other _____
☐ Unknown

☐ **Internal Corrosion**

7. Results of visual examination:
☐ Localized Pitting ☐ General Corrosion ☐ Not cut open
☐ Other _____
8. Cause of corrosion: (select all that apply)
☐ Corrosive Commodity ☐ Water drop-out/Acid ☐ Microbiological ☐ Erosion
☐ Other _____
9. The cause(s) of corrosion selected in Question 8 is based on the following; (select all that apply)
☐ Field examination ☐ Determined by metallurgical analysis
☐ Other _____
10. Location of corrosion: (select all that apply)
☐ Low point in pipe ☐ Elbow ☐ Drop-out
☐ Other _____
11. Was the gas/fluid treated with corrosion inhibitors or biocides? ☐ Yes ☐ No
12. Were any liquids found in the distribution system where the Incident occurred?
☐ Yes ☐ No

Complete the following if any Corrosion Failure sub-cause is selected AND the "Part of system involved in Incident" (from PART C, Question 2) is Main, Service, or Service Riser.

13. Date of the most recent Leak Survey conducted: _____ / _____ / _____
Month Day Year

14. Has one or more pressure test been conducted since original construction at the point of the Incident?

☐ Yes ⇒ Most recent year tested: _____ Test pressure (psig): _____
☐ No

G2 – Natural Force Damage – *only one sub-cause can be picked from shaded left-handed column

☐ Earth Movement, NOT due to Heavy Rains/Floods

1. Specify: ☐ Earthquake ☐ Subsidence ☐ Landslide
☐ Other _____

☐ Heavy Rains/Floods

2. Specify: ☐ Washouts/Scouring ☐ Flotation ☐ Mudslide ☐ Other _____

☐ Lightning

3. Specify: ☐ Direct hit ☐ Secondary impact such as resulting nearby fires

☐ Temperature

4. Specify: ☐ Thermal Stress ☐ Frost Heave
☐ Frozen Components ☐ Other _____

☐ High Winds

☐ Other Natural Force Damage

5. Describe: _____

Complete the following if any Natural Force Damage sub-cause is selected.

6. Were the natural forces causing the Incident generated in conjunction with an extreme weather event? ☐ Yes ☐ No

6.a. If Yes, specify: (select all that apply) ☐ Hurricane ☐ Tropical Storm ☐ Tornado
☐ Other _____

G3 – Excavation Damage – *only one **sub-cause** can be picked from shaded left-hand column

<input type="checkbox"/> Excavation Damage by Operator (First Party)	
<input type="checkbox"/> Excavation Damage by Operator's Contractor (Second Party)	
<input checked="" type="checkbox"/> Excavation Damage by Third Party	
<input type="checkbox"/> Previous Damage due to Excavation Activity	<p>Complete the following ONLY IF the "Part of system Involved in Incident" (from PART C, Question 2) is Main, Service, or Service Riser.</p> <p>1. Date of the most recent Leak Survey conducted: _____ / _____ / _____ Month Day Year</p> <p>2. Has one or more pressure test been conducted since original construction at the point of the Incident?</p> <p><input type="checkbox"/> Yes ⇒ Most recent year tested: _____ Test pressure (psig): _____</p> <p><input type="checkbox"/> No</p>

Complete the following if Excavation Damage by Third Party is selected.

3. Did the operator get prior notification of the excavation activity? ☒ Yes ☐ No
- 3.a If Yes, Notification received from: (select all that apply) ☒ One-Call System ☐ Excavator ☐ Contractor ☐ Landowner

Complete the following mandatory CGA-DIRT Program questions if any Excavation Damage sub-cause is selected.

4. Do you want PHMSA to upload the following information to CGA-DIRT (www.cga-dirt.com)? ☐ Yes ☒ No
5. Right-of-Way where event occurred: (select all that apply)
- ☒ Public ⇒ Specify: ☒ City Street ☐ State Highway ☐ County Road ☐ Interstate Highway ☐ Other
- ☐ Private ⇒ Specify: ☐ Private Landowner ☐ Private Business ☐ Private Easement
- ☐ Pipeline Property/Easement
- ☐ Power/Transmission Line
- ☐ Railroad
- ☐ Dedicated Public Utility Easement
- ☐ Federal Land
- ☐ Data not collected
- ☐ Unknown/Other
6. Type of excavator: (select only one)
- ☐ Contractor ☐ County ☐ Developer ☐ Farmer ☐ Municipality ☐ Occupant
- ☐ Railroad ☐ State ☒ Utility ☐ Data not collected ☐ Unknown/Other
7. Type of excavation equipment: (select only one)
- ☐ Auger ☒ Backhoe/Trackhoe ☐ Boring ☐ Drilling ☐ Directional Drilling
- ☐ Explosives ☐ Farm Equipment ☐ Grader/Scraper ☐ Hand Tools ☐ Milling Equipment
- ☐ Probing Device ☐ Trencher ☐ Vacuum Equipment ☐ Data not collected ☐ Unknown/Other
8. Type of work performed: (select only one)
- ☐ Agriculture ☐ Cable TV ☐ Curb/Sidewalk ☐ Building Construction ☐ Building Demolition
- ☐ Drainage ☐ Driveway ☐ Electric ☐ Engineering/Surveying ☐ Fencing
- ☐ Grading ☐ Irrigation ☐ Landscaping ☐ Liquid Pipeline ☐ Milling
- ☐ Natural Gas ☐ Pole ☐ Public Transit Authority ☐ Railroad Maintenance ☐ Road Work
- ☐ Sewer (Sanitary/Storm) ☐ Site Development ☐ Steam ☐ Storm Drain/Culvert ☐ Street Light
- ☐ Telecommunications ☐ Traffic Signal ☐ Traffic Sign ☒ Water ☐ Waterway Improvement
- ☐ Data not collected ☐ Unknown/Other

(This CGA-DIRT section continued on next page with Question 9.)

9. Was the One-Call Center notified? ☒ Yes ☐ No

9.a If Yes, specify ticket number: 190227812

9.b If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified:

10. Type of Locator: ☐ Utility Owner ☒ Contractor Locator ☐ Data not collected ☐ Unknown/Other

11. Were facility locate marks visible in the area of excavation? ☒ No ☐ Yes ☐ Data not collected ☐ Unknown/Other

12. Were facilities marked correctly? ☒ No ☐ Yes ☐ Data not collected ☐ Unknown/Other

13. Did the damage cause an interruption in service? ☐ No ☒ Yes ☐ Data not collected ☐ Unknown/Other

13.a If Yes, specify duration of the interruption: 3.00 hours

14. Description of the CGA-DIRT Root Cause (select only the one predominant first level CGA-DIRT Root Cause and then, where available as a choice, the one predominant second level CGA-DIRT Root Cause as well):

☐ One-Call Notification Practices Not Sufficient: (select only one)

- ☐ No notification made to the One-Call Center
- ☐ Notification to One-Call Center made, but not sufficient
- ☐ Wrong information provided

☒ Locating Practices Not Sufficient: (select only one)

- ☐ Facility could not be found/located
- ☒ Facility marking or location not sufficient
- ☐ Facility was not located or marked
- ☐ Incorrect facility records/maps

☐ Excavation Practices Not Sufficient: (select only one)

- ☐ Excavation practices not sufficient (other)
- ☐ Failure to maintain clearance
- ☐ Failure to maintain the marks
- ☐ Failure to support exposed facilities
- ☐ Failure to use hand tools where required
- ☐ Failure to verify location by test-hole (pot-holing)
- ☐ Improper backfilling

☐ One-Call Notification Center Error

☐ Abandoned Facility

☐ Deteriorated Facility

☐ Previous Damage

☐ Data Not Collected

☐ Other / None of the Above (explain)

G4 – Other Outside Force Damage – *only one sub-cause can be selected from the shaded left-hand column	
<input type="checkbox"/> Nearby Industrial, Man-made, or Other Fire/Explosion as Primary Cause of Incident	
<input type="checkbox"/> Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation	1. Vehicle/Equipment operated by: <i>(select only one)</i> <input type="checkbox"/> Operator <input type="checkbox"/> Operator's Contractor <input type="checkbox"/> Third Party
<input type="checkbox"/> Damage by Boats, Barges, Drilling Rigs, or Other Maritime Equipment or Vessels Set Adrift or Which Have Otherwise Lost Their Mooring	2. Select one or more of the following IF an extreme weather event was a factor: <input type="checkbox"/> Hurricane <input type="checkbox"/> Tropical Storm <input type="checkbox"/> Tornado <input type="checkbox"/> Heavy Rains/Flood <input type="checkbox"/> Other _____
<input type="checkbox"/> Routine or Normal Fishing or Other Maritime Activity NOT Engaged in Excavation	
<input type="checkbox"/> Electrical Arcing from Other Equipment or Facility	
<input type="checkbox"/> Previous Mechanical Damage NOT Related to Excavation	<p>Complete the following ONLY IF the "Part of system involved in Incident" (from PART C, Question 2) is Main, Service, or Service Riser.</p> <p>3. Date of the most recent Leak Survey conducted: _____ / _____ / _____ Month Day Year</p> <p>4. Has one or more pressure test been conducted since original construction at the point of the Incident? <input type="checkbox"/> Yes → Most recent year tested: _____ Test pressure (psig): _____ <input type="checkbox"/> No</p>
<input type="checkbox"/> Intentional Damage	5. Specify: <input type="checkbox"/> Vandalism <input type="checkbox"/> Terrorism <input type="checkbox"/> Theft of transported commodity <input type="checkbox"/> Theft of equipment <input type="checkbox"/> Other _____
<input type="checkbox"/> Other Outside Force Damage	6. Describe: _____

G5 – Pipe, Weld, or Joint Failure – *only one sub-cause can be selected from the shaded left-hand column	
<input type="checkbox"/> Body of Pipe	1. Specify: <input type="checkbox"/> Dent <input type="checkbox"/> Gouge <input type="checkbox"/> Bend <input type="checkbox"/> Arc Burn <input type="checkbox"/> Crack <input type="checkbox"/> Other _____
<input type="checkbox"/> Butt Weld	2. Specify: <input type="checkbox"/> Pipe <input type="checkbox"/> Fabrication <input type="checkbox"/> Other _____
<input type="checkbox"/> Fillet Weld	3. Specify: <input type="checkbox"/> Branch <input type="checkbox"/> Hot Tap <input type="checkbox"/> Fitting <input type="checkbox"/> Repair Sleeve <input type="checkbox"/> Other _____
<input type="checkbox"/> Pipe Seam	4. Specify: <input type="checkbox"/> LF ERW <input type="checkbox"/> HF ERW <input type="checkbox"/> Flash Weld <input type="checkbox"/> DSAW <input type="checkbox"/> SAW <input type="checkbox"/> Spiral <input type="checkbox"/> Other _____
<input type="checkbox"/> Threaded Metallic Pipe	
<input type="checkbox"/> Mechanical Fitting	<p>5. Specify the mechanical fitting involved: <input type="checkbox"/> Stub type fitting <input type="checkbox"/> Nut follower type fitting <input type="checkbox"/> Bolted type fitting <input type="checkbox"/> Other _____</p> <p>6. Specify the type of mechanical fitting: <input type="checkbox"/> Service Tee <input type="checkbox"/> Coupling <input type="checkbox"/> Service Head Adapter <input type="checkbox"/> Basement Adapter <input type="checkbox"/> Riser <input type="checkbox"/> Elbow <input type="checkbox"/> Other _____</p> <p>7. Manufacturer: _____</p> <p>8. Year manufactured: _____</p> <p>9. Year installed: _____</p> <p>10. Other attributes: _____</p> <p>11. Specify the two materials being joined:</p> <p>11.a First material being joined: <input type="checkbox"/> Steel <input type="checkbox"/> Cast/Wrought Iron <input type="checkbox"/> Ductile Iron <input type="checkbox"/> Copper <input type="checkbox"/> Plastic <input type="checkbox"/> Unknown <input type="checkbox"/> Other ⇒ Specify: _____</p> <p>11.b If Plastic ⇒ Specify: <input type="checkbox"/> Polyvinyl Chloride (PVC) <input type="checkbox"/> Polyethylene (PE) <input type="checkbox"/> Cross-linked Polyethylene (PEX) <input type="checkbox"/> Polybutylene (PB) <input type="checkbox"/> Polypropylene (PP) <input type="checkbox"/> Acrylonitrile Butadiene Styrene (ABS) <input type="checkbox"/> Polyamide (PA) <input type="checkbox"/> Cellulose Acetate Butyrate (CAB) <input type="checkbox"/> Other ⇒ Specify: _____</p> <p>11.c Second material being joined: <input type="checkbox"/> Steel <input type="checkbox"/> Cast/Wrought Iron <input type="checkbox"/> Ductile Iron <input type="checkbox"/> Copper <input type="checkbox"/> Plastic <input type="checkbox"/> Unknown <input type="checkbox"/> Other ⇒ Specify: _____</p> <p>11.d If Plastic ⇒ Specify: <input type="checkbox"/> Polyvinyl Chloride (PVC) <input type="checkbox"/> Polyethylene (PE) <input type="checkbox"/> Cross-linked Polyethylene (PEX) <input type="checkbox"/> Polybutylene (PB) <input type="checkbox"/> Polypropylene (PP) <input type="checkbox"/> Acrylonitrile Butadiene Styrene (ABS) <input type="checkbox"/> Polyamide (PA) <input type="checkbox"/> Cellulose Acetate Butyrate (CAB) <input type="checkbox"/> Other ⇒ Specify: _____</p> <p>12. If used on plastic pipe, did the fitting – as designed by the manufacturer – include restraint? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p>12.a If Yes, specify: <input type="checkbox"/> Cat. I <input type="checkbox"/> Cat. II <input type="checkbox"/> Cat. III <input type="checkbox"/> DOT 192.283</p>

<input type="checkbox"/> Compression Fitting	<p>13. Fitting type: _____</p> <p>14. Manufacturer: _____</p> <p>15. Year manufactured: _____</p> <p>16. Year installed: _____</p> <p>17. Other attributes: _____</p> <p>18. Specify the two materials being joined:</p> <p>18.a First material being joined:</p> <p><input type="checkbox"/> Steel <input type="checkbox"/> Cast/Wrought Iron</p> <p><input type="checkbox"/> Ductile Iron <input type="checkbox"/> Copper <input type="checkbox"/> Plastic</p> <p><input type="checkbox"/> Unknown</p> <p><input type="checkbox"/> Other ⇒ Specify: _____</p> <p>18.b If Plastic ⇒ Specify: <input type="checkbox"/> Polyvinyl Chloride (PVC) <input type="checkbox"/> Polyethylene (PE)</p> <p><input type="checkbox"/> Cross-linked Polyethylene (PEX) <input type="checkbox"/> Polybutylene (PB)</p> <p><input type="checkbox"/> Polypropylene (PP) <input type="checkbox"/> Acrylonitrile Butadiene Styrene (ABS)</p> <p><input type="checkbox"/> Polyamide (PA) <input type="checkbox"/> Cellulose Acetate Butyrate (CAB)</p> <p><input type="checkbox"/> Other ⇒ Specify: _____</p> <p>18.c Second material being joined:</p> <p><input type="checkbox"/> Steel <input type="checkbox"/> Cast/Wrought Iron</p> <p><input type="checkbox"/> Ductile Iron <input type="checkbox"/> Copper <input type="checkbox"/> Plastic</p> <p><input type="checkbox"/> Unknown</p> <p><input type="checkbox"/> Other ⇒ Specify: _____</p> <p>18.d If Plastic ⇒ Specify: <input type="checkbox"/> Polyvinyl Chloride (PVC) <input type="checkbox"/> Polyethylene (PE)</p> <p><input type="checkbox"/> Cross-linked Polyethylene (PEX) <input type="checkbox"/> Polybutylene (PB)</p> <p><input type="checkbox"/> Polypropylene (PP) <input type="checkbox"/> Acrylonitrile Butadiene Styrene (ABS)</p> <p><input type="checkbox"/> Polyamide (PA) <input type="checkbox"/> Cellulose Acetate Butyrate (CAB)</p> <p><input type="checkbox"/> Other ⇒ Specify: _____</p>
<input type="checkbox"/> Fusion Joint	<p>19. Specify: <input type="checkbox"/> Butt, Heat Fusion <input type="checkbox"/> Butt, Electrofusion <input type="checkbox"/> Saddle, Heat Fusion</p> <p><input type="checkbox"/> Saddle, Electrofusion <input type="checkbox"/> Socket, Heat Fusion <input type="checkbox"/> Socket, Electrofusion</p> <p><input type="checkbox"/> Other: _____</p> <p>20. Year installed: _____</p> <p>21. Other attributes: _____</p> <p>22. Specify the two materials being joined:</p> <p>22.a First material being joined:</p> <p><input type="checkbox"/> Polyvinyl Chloride (PVC) <input type="checkbox"/> Polyethylene (PE)</p> <p><input type="checkbox"/> Cross-linked Polyethylene (PEX) <input type="checkbox"/> Polybutylene (PB)</p> <p><input type="checkbox"/> Polypropylene (PP) <input type="checkbox"/> Acrylonitrile Butadiene Styrene (ABS)</p> <p><input type="checkbox"/> Polyamide (PA) <input type="checkbox"/> Cellulose Acetate Butyrate (CAB)</p> <p><input type="checkbox"/> Other ⇒ Specify: _____</p> <p>22.b Second material being joined:</p> <p><input type="checkbox"/> Polyvinyl Chloride (PVC) <input type="checkbox"/> Polyethylene (PE)</p> <p><input type="checkbox"/> Cross-linked Polyethylene (PEX) <input type="checkbox"/> Polybutylene (PB)</p> <p><input type="checkbox"/> Polypropylene (PP) <input type="checkbox"/> Acrylonitrile Butadiene Styrene (ABS)</p> <p><input type="checkbox"/> Polyamide (PA) <input type="checkbox"/> Cellulose Acetate Butyrate (CAB)</p> <p><input type="checkbox"/> Other ⇒ Specify: _____</p>
<input type="checkbox"/> Other Pipe, Weld, or Joint Failure	<p>23. Describe: _____</p>

Complete the following if any Pipe, Weld, or Joint Failure sub-cause is selected.

24. Additional Factors: (select all that apply) ☐ Dent ☐ Gouge ☐ Pipe Bend ☐ Arc Burn ☐ Crack ☐ Lack of Fusion
☐ Lamination ☐ Buckle ☐ Wrinkle ☐ Misalignment ☐ Burnt Steel
☐ Other _____

25. Was the Incident a result of:

☐ Construction defect, specify: ⇒ ☐ Poor workmanship ☐ Procedure not followed ☐ Poor construction/installation procedures
☐ Material defect, specify: ⇒ ☐ Long seam ☐ Other _____
☐ Design defect
☐ Previous damage

26. Has one or more pressure test been conducted since original construction at the point of the Incident?

☐ Yes ⇒ Most recent year tested: _____ Test pressure (psig): _____
☐ No

G6 – Equipment Failure – *only one sub-cause can be selected from the shaded left-hand column

<input type="checkbox"/> Malfunction of Control/Relief Equipment	1. Specify: (select all that apply) <input type="checkbox"/> Control Valve <input type="checkbox"/> Instrumentation <input type="checkbox"/> SCADA <input type="checkbox"/> Communications <input type="checkbox"/> Block Valve <input type="checkbox"/> Check Valve <input type="checkbox"/> Relief Valve <input type="checkbox"/> Power Failure <input type="checkbox"/> Stopple/Control Fitting <input type="checkbox"/> Pressure Regulator <input type="checkbox"/> Other _____
<input type="checkbox"/> Threaded Connection Failure	2. Specify: <input type="checkbox"/> Pipe Nipple <input type="checkbox"/> Valve Threads <input type="checkbox"/> Threaded Pipe Collar <input type="checkbox"/> Threaded Fitting <input type="checkbox"/> Other _____
<input type="checkbox"/> Non-threaded Connection Failure	3. Specify: <input type="checkbox"/> O-Ring <input type="checkbox"/> Gasket <input type="checkbox"/> Other Seal or Packing <input type="checkbox"/> Other _____
<input type="checkbox"/> Valve	4. Specify: <input type="checkbox"/> Manufacturing defect <input type="checkbox"/> Other _____ 4.a Valve type: _____ 4.b Manufactured by: _____ 4.c Year manufactured: _____
<input type="checkbox"/> Other Equipment Failure	5. Describe: <div style="border: 1px solid black; height: 40px; width: 100%;"></div>

G7 – Incorrect Operation – *only one sub-cause can be selected from the shaded left-hand column

<input type="checkbox"/> Damage by Operator or Operator's Contractor NOT Related to Excavation and NOT due to Motorized Vehicle/Equipment Damage	
<input type="checkbox"/> Valve Left or Placed in Wrong Position, but NOT Resulting in an Overpressure	
<input type="checkbox"/> Pipeline or Equipment Overpressured	
<input type="checkbox"/> Equipment Not Installed Properly	
<input type="checkbox"/> Wrong Equipment Specified or Installed	
<input type="checkbox"/> Other Incorrect Operation	1. Describe: _____

Complete the following if any Incorrect Operation sub-cause is selected.

2. Was this Incident related to: (select all that apply)

- ☐ Inadequate procedure
☐ No procedure established
☐ Failure to follow procedure
☐ Other: _____

3. What category type was the activity that caused the Incident:

- ☐ Construction
☐ Commissioning
☐ Decommissioning
☐ Right-of-Way activities
☐ Routine maintenance
☐ Other maintenance
☐ Normal operating conditions
☐ Non-routine operating conditions (abnormal operations or emergencies)

4. Was the task(s) that led to the Incident identified as a covered task in your Operator Qualification Program? ☐ Yes ☐ No

4.a If Yes, were the individuals performing the task(s) qualified for the task(s)?

- ☐ Yes, they were qualified for the task(s)
☐ No, but they were performing the task(s) under the direction and observation of a qualified individual
☐ No, they were not qualified for the task(s) nor were they performing the task(s) under the direction and observation of a qualified individual

G8 – Other Incident Cause – *only one sub-cause can be selected from the shaded left-hand column

<input type="checkbox"/> Miscellaneous	1. Describe: _____
<input type="checkbox"/> Unknown	2. Specify: <input type="checkbox"/> Investigation complete, cause of Incident unknown <input type="checkbox"/> Still under investigation, cause of Incident to be determined* (*Supplemental Report required)

[illegible]